

## NEW RECORDS FOR SOUTH TURKEY (C4)

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ABSTRACT. A list of 107 new records for S Turkey (provinces of Konya and İçel, square C4) is given.

The following plants were collected by the authors in the Turkish provinces of Konya and İçel (C4) between 1977 and 1980. All taxa are apparently new for the grid squares as assessed by reference to the *Flora of Turkey and the East Aegean Islands* vol. 1-7, as well as recent publications containing new floristic records†. Specimens on which records are based are kept in Konya (Selçuk Üniversitesi) and Edinburgh (Royal Botanic Garden). The numbers in square brackets refer to volume and page number in the *Flora of Turkey*; comments include those on characters where our observations differ from those of the *Flora*.

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### ASPLENIACEAE

*Ceterach officinarum* DC. [1:52]

C4 Konya: Bucakkişla, Dede Tepe, rocky slopes, macchie, 560m, 30 v 1979, Vural 1801.

### RANUNCULACEAE

*Consolida hellespontica* (Boiss.) Chater [1:133]

C4 Konya: Karaman to Bucakkişla, Meraalan, fields, 1200m, 1 vi 1978, Vural 809.

*Ranunculus dissectus* Bieb., *sensu lato* [1:163]

C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1750m, 6 vii 1978, Vural 942.

*R. cuneatus* Boiss. [1:176]

C4 Konya: Ermenek, Damlaçal, open Juniperus excelsa forest, stony places, 1550m, 26 v 1979, Vural 1769.

*Ceratocephalus falcatus* (L.) Pers. [1:198]

C4 Konya: Ermenek to Tekeçati, 1400m, 4 iv 1979, Vural 1224.

### PAPAVRACEAE

*Corydalis solida* (L.) Swartz subsp. *tauricola* Cullen & Davis [1:241]

C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1750m, 4 iv 1979, Vural 1221.

*C. rutifolia* (Sibth. & Sm.) DC. subsp. *erdellii* (Zucc.) Cullen & Davis [1:242]

C4 Konya: Ermenek, Yellibel, wet places, 1900m, 4 iv 1979, Vural 1226.

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† HUBER-MORATH, A. (1980). Ergänzungen zu P. H. DAVIS 'Flora of Turkey and the East Aegean Islands' 1-6 (1965-78). I. *Candollea* 35(2): 569-608.

—(1981). Op. cit. II. *Candollea* 36(1): 77-114.

SORGER, F. (1978). Beiträge zur Flora der Türkei II. *Stapfia* 3: 1-127.

## CRUCIFERAE

*Raphanus raphanistrum* L. [I:270]

C4 İçel: Mut, Kadiköyü, dry river bank, 250m, 6 iv 1979, *Vural* 1193.

*Rapistrum rugosum* (L.) All. [I:273]

C4 İçel: Mut, Kadiköyü, dry river bank, 250m, 6 iv 1979, *Vural* 1187.

*Iberis spruneri* Jord. [I:311]

C4 Konya: Ermenek, S slope of Kizil Da., stony places, 2100m, 9 viii 1978, *Vural* 1039.

*Aethionema iberideum* (Boiss.) Boiss. [I:324]

C4 Konya: Ermenek, Yellibel, stony places, 1900m, 4 iv 1979, *Vural* 1225.

*Ae. armenum* Boiss. [I:327]

C4 Konya: Ermenek to Tekeçati, dry stony steppe, 1450m, 1 vi 1979, *Vural* 1299.

*Capsella rubella* Reuter [I:344]

C4 İçel: Mut, Kadiköyü, river bed, 250m, 6 iv 1979, *Vural* 1189. [Sepal colour (green with red margins) and petal size as in *C. rubella* but fruit margins straight or only slightly concave as in *C. bursa-pastoris* (L.) Medik.]

*Alyssum strictum* Willd. [I:379]

C4 Konya: Ermenek, Damlaçal, open Juniperus excelsa forest, stony places, 1700m, 27 v 1979, *Vural* 1686.

*A. condensatum* Boiss. & Hausskn. subsp. *condensatum* [I:401]

C4 Konya: Karaman, Sertavul pass, stony and rocky places, 1630m, 23 vi 1979, *Vural* 1595.

*Clypeola ciliata* Boiss. [I:411]

C4 Konya: Ermenek to Kayaönü, dry stony places, 1200m, 17 vi 1979, *Vural* 1707.

*Erophila minima* C. A. Meyer [I:422]

C4 Konya: Ermenek to Tekeçati, stony places, 1600m, 4 iv 1979, *Vural* 1245.

*Aubrietia anamasica* Peşmen & Güner [I:444–447, *Aubrietia*]

C4 Konya: Sille, W slope of Büyükgevele Tepe, 1450–1700m, 16 vi 1979, *Dural* 179. [The only other record for this species is from C3 Isparta.]

*Erysimum hamosum* [Blanche ex] Post [I:474]

C4 Konya: Ermenek to Tekeçati, stony places, 1450m, 1 vi 1979, *Vural* 1292. [Siliquae up to 50mm.]

*Sisymbrium orientale* L. [I:484]

C4 Konya: Bucakışla, dry banks of stream, 500m, 29 v 1979, *Vural* 1838.

*S. loeselii* L. [I:485]

C4 Konya: Ermenek, Tekeçati to Damlaçal, cliffs, 1400m, 6 vii 1978, *Vural* 914.

## CAPPARACEAE

*Capparis spinosa* L. var. *spinosa* [I:496]

C4 İçel: Mut, Suçati to Evrenköy, 300m, 20 vii 1977, *Vural* 459.

*C. ovata* Desf. var. *herbacea* (Willd.) Zoh. [I:497]

C4 Konya: Akyokuş, S slopes of Keçili De., 1150m, 14 vi 1980, *Dural* 576.

## VIOLACEAE

*Viola occulta* Lehm. [I:529]

C4 Konya: Karaman, Sertavul pass, stony places, 1600m, 2 vi 1977, *Vural* 400.

*V. modesta* Fenzl [I:530]

C4 Konya: Ermenek to Tekeçati, stony mountain slopes, 1600m, 4 iv 1979, *Vural* 1241.

## CARYOPHYLLACEAE

*Arenaria ledebouriana* Fenzl var. *pauciflora* McNeill [II:35]

C4 Konya: Ermenek, S slope of Kizil Da., stony places, 2100m, 9 vii 1978, *Vural* 1045. [Flowering stems with 1–4 internodes below the inflorescence.]

*Minuartia montana* L. subsp. *wiesneri* (Stapf) McNeill [II:55]

C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1479.

*M. anatolica* (Boiss.)Woron. var. *tetrasticha* McNeill [II:60]

C4 Konya: Ermenek, S slope of Kizil Da., stony places, 2100m, 9 vii 1978, *Vural* 1041.

*M. mesogitana* (Boiss.)Hand-Mazz. subsp. *kotschyana* (Boiss.)McNeill [II:64]

C4 Konya: Ermenek, Ezvendi, Pinus brutia forest, 1150m, 28 v 1978, *Vural* 502.

*Dianthus leptopetalus* Willd. [II:114]

C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1487.

*D. zonatus* Fenzl var. *aristatus* (Boiss.)Reeve [II:128]

C4 Konya: Karaman, Kozlubucak, Pinus nigra forest, 1410m, 21 vi 1979, *Vural* 1445.

*Silene dianthoides* Pers. [II:211]

C4 Konya: Ermenek, Damlaçal, stony places, 1700m, 27 v 1979, *Vural* 1351.

*S. dichotoma* Ehrh. subsp. *dichotoma* [II:234]

C4 Konya: Ermenek, S slope of Boz Da., macchie, 1200m, 27 v 1978, *Vural* 623.

subsp. *sibthorpiana* (Reichb.)Rech. [II:236]

C4 Konya: Konya to Beyşehir, nr Sille, Keçili De., 1350m, 9 vi 1979, *Dural* 62.

#### ILLECEBRACEAE

*Paronychia argyroloba* Stapf [II:256]

C4 Konya: Karaman, Sertavul pass, stony and rocky places, 1630m, 23 vi 1979, *Vural* 1598.

#### POLYGONACEAE

*Rumex acetosella* L. [II:284]

C4 Konya: Sille, W slope of Büyükgevele Tepe, 1500m, 16 vi 1979, *Dural* 457.

*R. scutatus* L. [II:284]

C4 Konya: Ermenek to Tekeçati, 1600m, 22 vii 1977, *Vural* 431.

#### CHENOPODIACEAE

*Chenopodium album* L. subsp. *album* var. *microphyllum* (Boenn.)Aellen [II:304]

C4 Konya: Ermenek, Aktepe, 1600m, 10 vii 1978, *Vural* 1076.

#### LINACEAE

*Linum austriacum* L. subsp. *glaucescens* (Boiss.)Davis [II:447]

C4 Konya: Ermenek to Tekeçati, field margins, 1550m, 27 v 1979, *Vural* 1657.

#### GERANIACEAE

*Erodium leucanthum* Boiss. [II:482]

C4 Konya: Sille, W slopes of Büyükgevele Tepe, 1450–1700m, 16 vi 1979, *Dural* 637.

#### RHAMNACEAE

*Rhamnus pallasii* Fisch. & Mey. [II:536]

C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1700m, 7 vii 1978, *Vural* 994.

#### ANACARDIACEAE

*Cotinus coggyria* Scop. [II:543]

C4 Konya: Ermenek, above Keşlik, 1150m, 28 v 1978, *Vural* 563.

#### LEGUMINOSAE

*Cercis siliquastrum* L. [III:8]

C4 Konya: Ermenek, Ezvendi to Mihaller, Pinus brutia forest, 1050m, 28 v 1978, *Vural* 532.

*Prosopis farcta* (Banks & Sol.)Macbride [III:9]

C4 İçel: Mut, Suçati to Evrenköy, fallow fields, 300m, 20 vii 1977, *Vural* 461.

**Spartium junceum** L. [III:32]C4 İçel: Silifke to Mut, 150m, 18 vi 1979, *Vural* 1515.**Astragalus leporinus** Boiss. var. **hirsutus** (Post)Chamberlain [III:112]C4 Konya: Ermenek, above Keşlik, 1150m, 28 v 1978, *Vural* 569.**A. strictifolius** Boiss. var. **kutepovii** Şirj. [III:144]C4 Konya: Sille, NE slope of Büyükgevele Tepe, 1450m, 22 vii 1980, *Dural* 666.**A. cephalotes** Banks & Sol. var. **brevicalyx** Eig [III:152]C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1750m, 7 vii 1978, *Vural* 960.**A. parnassi** Boiss. subsp. **cylleneus** (Boiss. & Heldr.)Hayek [III:166]C4 Konya: Ermenek, Damlaçal, Cedrus libani forest, 1800m, 8 vii 1978, *Vural* 974.**A. setulosus** Boiss. & Bal. [III:201]C4 İçel: Mut, NW slope of Büyükeğri Da., 1500m, 24 vii 1977, *Vural* 443.**Ononis ornithopodioides** L. [III:377]C4 İçel: Mut to Selamlı, phrygana, 330m, 6 iv 1979, *Vural* 1204.**O. reclinata** L. [III:378]C4 Konya: Bucakkişla, E slope of Çevlik Da., Pinus brutia forest, 400m, 31 v 1978, *Vural* 751.**Trifolium boissieri** (Guss. ex)Boiss. [III:400]C4 Konya: Bucakkişla, Dede Tepe, macchie on dry rocky slopes, 600m, 29 v 1979, *Vural* 1854.**Medicago minima** (L.)Bart. var. **minima** [III:498]C4 Konya: Sille, W slopes of Büyükgevele Tepe, field margins, 1350m, 16 vi 1979, *Dural* 378.**Lotus corniculatus** L. var. **alpinus** Ser. [III:527]C4 Konya: Ermenek, Yellibel, SW slopes of Kizil Da., subalpine pasture, 1800m, 9 vii 1978, *Vural* 1025.**Anthyllis vulneraria** L. subsp. **variegata** (Boiss.)Cullen [III:536]C4 Konya: Ermenek to Tekeçatı, mountain steppe, field margins, 1600m, 2 vi 1979, *Vural* 1816.**Hippocrepis ciliata** Willd. [III:546]C4 Konya: Bucakkişla, E slopes of Çevlik Da., Pinus brutia forest, 650m, 30 v 1979, *Vural* 1826.

## ROSACEAE

**Prunus divaricata** Ledeb. subsp. **divaricata** [IV:11]C4 Konya: E side of Sille dam, 1250m, 14 vi 1980, *Dural* 689.subsp. **ursina** (Kotschy)Browicz [IV:11]C4 İçel: Mut, Adras Da., 1500m, 20 vii 1977, *Vural* 451.**Rubus sanctus** Schreber [IV:33]C4 İçel: Mut, Köprübaşı, edge of irrigation ditches, 300m, 23 vii 1977, *Vural* 377.**Potentilla recta** L. [IV:53]C4 Konya: Ermenek to Tekeçatı, field margins, 1600m, 2 vi 1979, *Vural* 1824.**Crataegus szovitsii** Pojark. [IV:138]C4 Konya: Ermenek, Koças, Cedrus libani forest, 1500m, 11 vii 1978, *Vural* 1102.

## PUNICACEAE

**Punica granatum** L. [IV:173]C4 Konya: Karaman, Bucakkişla, cultivated, 400m, 30 v 1978, *Vural* 834.

## CRASSULACEAE

**Sedum litoreum** Guss. [IV:239]C4 Konya: Ermenek, Kuruseki, macchie, 1100m, 27 v 1978, *Vural* 614.

## UMBELLIFERAE

**Smyrniurn connatum** Boiss. & Kotschy [IV:338]C4 Konya: Ermenek, S slopes of Boz Da., 1200m, 27 v 1978, *Vural* 634.

*Pimpinella cretica* Poir. var. *cretica* [IV:356]

C4 Konya: Bucakışla, Dede Tepe, dry rocky slopes, macchie, 560m, 29 v 1979, *Vural* 1881.

*Hippomarathrum microcarpum* (Bieb.) Fedtsch. [IV:391]

C4 Konya: Ermenek, Tekeçati, replanted mixed *Pinus nigra* forest, 1450m, 10 vii 1978, *Vural* 1092.

*Pupleurum zoharii* Snogerup [IV:413]

C4 İçel: Mut, Suçati to Evren, 300m, 20 vii 1977, *Vural* 470.

*Ferula rigidula* DC. [IV:446]

C4 Konya: Ermenek, S slope of Boz Da., 1200m, 27 v 1978, *Vural* 638.

*F. elaeocheitis* Korovin [IV:449]

C4 Konya: Ermenek, Damlaçal, *Cedrus libani* forest, 1750m, 6 vii 1978, *Vural* 928.

*Crenosciadium siifolium* Boiss. & Heldr. [IV:473]

C4 Konya: Ermenek, Aktepe, Boğazçayır, boggy places, 1600m, 10 vii 1978, *Vural* 1055. [Stem 15–70cm. Basal leaves 1–2-pinnate, 5–30cm including petioles; leaflets 2–4-paired, obovate to orbicular, 10–25mm, crenate-dentate. Stem leaves reduced, simple to 1-pinnate; leaflets of the stem leaves in 2 pairs, linear-lanceolate, c.25mm, remotely serrate. Umbels very unequally 3–6-rayed, stalks dichotomously branched.]

*Daucus carota* L. [IV:531]

C4 İçel: Mut, NW slopes of Büyükeğri Da., 1500m, 24 vii 1977, *Vural* 436.

#### VALERIANACEAE

*Valerianella dactylophylla* Boiss. & Hohen. [IV:564]

C4 Konya: Ermenek, Damlaçal, stony places, 1700m, 27 v 1979, *Vural* 1348.

*V. glomerata* Boiss. & Bal. [IV:577]

C4 Konya: Ermenek, Damlaçal, open *Juniperus excelsa* forest, stony places, 1500m, 26 v 1979, *Vural* 1736.

#### COMPOSITAE

*Xanthium strumarium* L. subsp. *cavanillesii* (Schouw) D. Löve & P. Dansereau [V:48]

C4 İçel: Silifke, sandy places nr sea, 17 vi 1979, *Vural* 1387.

*Phagnalon rupestre* (L.) DC. [V:79]

C4 İçel: Mut, Suçati to Kadıköy, phrygana on stony slopes, 270m, 6 iv 1979, *Vural* 1363.

*Calendula arvensis* L. [V:171]

C4 İçel: Mut to Selamlı, 300m, 7 iv 1979, *Vural* 1219.

*Matricaria chamomilla* L. var. *recutita* (L.) Grierson [V:294]

C4 İçel: Mut, Kadıköy, Göksu river bed, 250m, 6 iv 1979, *Vural* 1192.

*Onopordum sibthorpiianum* Boiss. & Heldr. [V:367]

C4 Konya: Ermenek to Tekeçati, limestone slope, mountain path, 1450m, 7 vii 1978, *Vural* 981.

*Centaurea cariensis* Boiss. subsp. *maculiceps* (O. Schwarz) Wagenitz [V:492]

C4 Konya: Karaman, Ağaçyurdu, *Pinus nigra* forest, 1400m, 21 vi 1979, *Vural* 1421.

*C. drabifolia* Sm. subsp. *austro-occidentalis* Wagenitz [V:514]

C4 Konya: Ermenek to Tekeçati, 1450m, 7 vii 1978, *Vural* 964.

*Carlina involucreta* Poir. subsp. *libanotica* (Boiss.) Meusel & Kästner [V:600]

C4 İçel: Mut to Silifke, roadside, 200m, 17 vi 1979, *Vural* 1384.

*Scorzonera cana* (C. A. Meyer) Hoffm. var. *radicosa* (Boiss.) Chamberlain [V:637]

C4 Konya: Ermenek, S slopes of Kızıl Da., stony places, 2100m, 9 vii 1978, *Vural* 1033.

*S. kotschyi* Boiss. [V:656]

C4 İçel: Mut to Selamlı, phrygana on stony slopes, 330m, 7 iv 1979, *Vural* 1205.

*Tragopogon latifolius* Boiss. var. *latifolius* [V:663]

C4 Konya: Karaman to Bucakışla, Meraalan, steppe, 1200m, 1 vi 1978, *Vural* 825.

*Pilosella hoppeana* (Schultes) C. H. & F. W. Schultz subsp. *troica* (Zahn) Sell & West [V:750]

C4 Konya: Silile, NE slope of Büyükevele Tepe, 1450m, 22 vii 1980, *Dural* 620.

*P. x macrotricha* (Boiss.) C. H. & F. W. Schultz [V:757]

C4 Konya: Silile, W slope of Büyükevele Tepe, 1550m, 2 viii 1980, *Dural* 621.

*P. x maschukensis* (Litw. & Zahn) Soják [V:759]

C4 Konya: Silile, NE slope of Büyükevele Tepe, 1350m, 2 viii 1980, *Dural* 622.

*Taraxacum uzunoglu* van Soest [V:801]

C4 Konya: Ermenek, Damlaçal, open *Juniperus excelsa* forest, stony places, 1700m, 27 v 1979, *Vural* 1339.

*Chondrilla juncea* L. var. *juncea* [V:812]

C4 Konya: Ermenek to Tekeçati, 1450m, 10 viii 1979, *Vural* 1934; Sille, summit of Büyükgevele Tepe, 1700m, 2 viii 1980, *Dural* 600.

#### CAMPANULACEAE

*Asyneuma limonifolium* (L.) Janchen subsp. *pestalozzae* (Boiss.) Damboldt [VI:72]

C4 Konya: Ermenek to Tekeçati, steppe, field margins, 1600m, 2 vi 1979, *Vural* 1810.

#### ASCLEPIADACEAE

*Vincetoxicum canescens* (Willd.) Decne. subsp. *canescens* [VI:168]

C4 Konya: Ermenek, S slope of Boz Da., 1200m, 27 v 1978, *Vural* 635.

*V. fuscatum* (Hornem.) Reichb. fil. subsp. *fuscatum* [VI:171]

C4 Konya: Sille, NE slope of Büyükgevele Tepe, 1350m, 27 vii 1980, *Dural* 567.

#### PEDALIACEAE

*Sesamum indicum* L. [VI:196]

C4 İçel: Mut, Suçati to Evren, cultivated, 300m, 20 vii 1977, *Vural* 465.

#### BORAGINACEAE

*Lappula sessiliflora* (Boiss.) Gürke [VI:260]

C4 Konya: S slopes of Takkeli Da., 1350m, 13 vi 1979, *Dural* 573.

#### SOLANACEAE

*Hyoscyamus niger* L. [VI:454]

C4 Konya: Ermenek, roadsides, 1275m, 2 vi 1979, *Vural* 1803.

#### SCROPHULARIACEAE

*Linaria genistifolia* (L.) Miller subsp. *praealta* (Boiss.) Davis [VI:660]

C4 Konya: Ermenek, Damlaçal, *Cedrus libani* forest, 1730m, 6 vii 1978, *Vural* 923.

*Veronica thymoides* P. H. Davis subsp. *hasandaghensis* M. A. Fischer [VI:740]

C4 Konya: Ermenek, Tekeçati, mountain steppe, 1650m, 31 v 1979, *Vural* 1312.

#### OROBANCHACEAE

*Orobanche cilicica* G. Beck [VII:10]

C4 Konya: Karaman to Seyithasan, steppe, 1200m, 20 vi 1979, *Vural* 1900.

#### LABIATAE

*Ajuga chamaepitys* (L.) Schreber subsp. *rechingeri* (M. Bilik) P. H. Davis [VII:52]

C4 Konya: Ermenek, Kuruseki, in *Quercus coccifera* scrub, 1100m, 27 v 1978, *Vural* 688.

*Marrubium rotundifolium* Boiss. [VII:173]

C4 Konya: Ermenek, dry rocky slopes, 1250m, 16 vi 1979, *Vural* 1700. [Stems 30–55cm.]

*Acinos rotundifolius* Pers. [VII:344]

C4 Konya: Karaman, Sertavul pass, stony places, 1650m, 23 vi 1979, *Vural* 1603.

## PLUMBAGINACEAE

**Limonium virgatum** (Willd.)Fourr. [VII:470]

C4 Içel: Silifke, sea shore, 17 vi 1979, *Vural* 1393.

## PLANTAGINACEAE

**Plantago atrata** Hoppe [VII:511]

C4 Konya: Ermenek to Tekeçati, mountain steppe, 1640m, 31 v 1979, *Vural* 1307.

## SANTALACEAE

**Thesium bergeri** Zucc. [VII:538]

C4 Konya: Karaman, Bucakkişla, N slope of Çevlik Da., 600m, 30 v 1978, *Vural* 846.

## RUBIACEAE

**Galium humifusum** Bieb. [VII:785]

C4 Içel: Mut, Kadiköyü, ditchsides, 270m, 17 vi 1979, *Vural* 1375.

**G. stepparum** Ehrend. & Schönb.-Tem. [VII:842]

C4 Konya: Karaman to Tarlaören, steppe, 1200m, 19 vi 1979, *Vural* 1481.